PHILIPS

Philips Medical Systems

www.medical.philips.com/us

Revisions

Note for Architects and/or Contractors: "If revisions are listed, these drawings must be thoroughly reviewed so that all changes can be incorporated into your project"

Rev. Level	Date	Revision Descriptions	By

Table of Contents

Section A - Equipment Plan

General Notes ---------- AN
Equipment Plan ---------- A1
Equipment Details ---------- AD1 - AD2
Transport Details ---------- AD3

Section S - Support Plan

Support Notes ---------- SN
Support Plan - Floor and Wall ---------- S1
Support Plan - Ceiling---------- S2
Support Details ---------- SD1 - SD2

Section E - Electrical Plan

Electrical Notes ---------- EN
Electrical Plan ---------- E1 - E2
Electrical Details ---------- ED1

Section N - Network Plan

Network Diagram ---------- N1

Check List ---------- CHK

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

Date

O.A. Number

Drawn By

Quote Number

Project Number
N-SRD040005

C1

Sheet 1 of 17

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HVAC Requirement for General Equipment Locations

Heating, ventilation, air conditioning requirement for general equipment locations must maintain temperature at 75° +/- 11° fahrenheit (24° +/- 6° celsius) and non-condensing relative humidity at 47%, +/- 28%.

(03.0)

Electrical Requirements
Optimus 65/80/C

Supply Configuration: 3 phase, 3 wire power and ground. Delta or wye

Nominal Line Voltage: 400, 440, 460 or 480 VAC, 60 Hz

Branch Power Requirement: 150 KVA

Circuit Breaker: 3 pole, 100 Amps (@ 480V)

(06.0)

Minimum Site Preparation Requirements

A smooth efficient installation is vital to Philips and its' customers. Understanding what the minimum site preparation requirements are will help achieve this goal. The following list clearly defines the requirements which must be fulfilled before the installation can begin.

1. Walls to be painted or covered, baseboards installed, floors to be tiled and/or covered, ceiling shall have grid tiles and lighting fixtures installed.

2. Doors and windows, especially radiation protection barriers, installed and finished with locksets operational.

3. All electrical convenience, conduit, raceway and junction boxes installed.

4. Incoming mains power operational and connected to room x-ray breaker.

5. 115v convenience outlets operational.

6. All support structures correctly installed. All channels, pipes, beams and/or other supporting devices should be level, parallel, and free of lateral or longitudinal movements.

7. All contractor supplied cables pulled and terminated.

8. A dust-free environment in and around the procedure room.

9. All HVAC (heating, ventilating and air conditioning) installed and operational as per specifications.

10. Architectural features such as computer floor, wood floor, casework, bulkheads, installed and finished. When technical cabinets are installed in a closet with doors, it is suggested that the customer install a temperature alarm in the event of an air conditioning failure.

11. All plumbing installed and finished.

12. Philips does not install or connect developing tanks, automatic processors or associated equipment, built in illuminators, cassette pass boxes, loading benches and cabinets, lead protective screens, panels or lead glass window and frame. This is to be done by the customer/contractor.

13. Clear door openings for moving equipment into the building must be 42" (1067mm) w x 82" (2083mm) h min. 48" (1219mm) w x 82" (2083mm) h rec., or larger contingent on an 8'-0" (2438mm) corridor width.

Note
Once Philips has moved equipment into the suite and started the installation, the contractor shall schedule his work around the Philips installation team on site. It is suggested that a telephone be provided in the room to receive telephone calls. This would alleviate facility staff from answering calls for Philips personnel.

Remote Service Diagnostics
Medical imaging equipment to be installed by Philips Medical is equipped with a service diagnostic feature which allows for remote and on site service diagnostics. To establish this feature, a dedicated direct-distance - dialing, voice-grade line must be installed as shown on plan. All costs with this feature are the responsibility of the customer.

(00.1)

General Specifications

1. Responsibility
The customer shall be solely responsible, at its expense for preparation of site, including any required structural alterations. The site preparation shall be in accordance with plans and specifications provided by Philips. Compliance with all safety, electrical, and building codes relevant to the equipment and its installation is the customer's responsibility. Sufficiency of such plans and specifications, specifically including, but not limited to the accuracy of the dimensions described therein, shall be the sole responsibility of customer. The customer shall advise Philips of conditions at or near the site which could adversely affect the carrying out of the installation work and shall ensure that such conditions are corrected and that the site is fully prepared and available to Philips before the installation work is due to begin. The customer shall provide all necessary plumbing, carpentry work, or conduit wiring required to attach and install products ready for use.

2. Permits
Customer shall obtain all permits and licenses required by federal, state/provincial or local authorities in connection with the construction, installation and operation of the products and shall bear any expense in obtaining same or in complying with any related rules, regulations, ordinances and statutes.

3. Radiation Protection
The customer or his contractor, at his own expense, shall obtain the service of a licensed radiation physicist to specify radiation protection. For the purpose of the radiation protection design for the suite, the physicist should assume a maximum kVp x-ray tube output of 150.

4. Asbestos and Other Toxic Substances
Philips assumes no hazardous waste (i.e., pcb's in existing transformers) exists at the site. If any hazardous materials are found, it shall be the sole responsibility of the customer to properly remove and dispose of this material at its expense. Any delays caused in the project for this special handling shall result in Philips time period for completion being extended by like period of time. Philips assumes that no asbestos material is involved in this project in any ceilings, walls or floors. If any asbestos material is found anywhere on the site, it shall be the customer's sole responsibility to properly remove and/or make safe this condition, at the customer's sole expense.

5. Labor
In the event local labor conditions make it impossible or undesirable to use Philips' regular employees for such installation and connection, such work shall be performed by laborers supplied by the customer, or by an independent contractor chosen by the customer at the customer's expense, and in such case, Philips agrees to furnish adequate engineering supervision for proper completion of the installation.

6. Schedule
The general contractor should provide Philips with a schedule of work to assist in the coordination of delivery of Philips supplied products which are to be installed by the contractor and delivery of the primary equipment.

7. Extended Installation or Turnkey Work by Philips.
Any room preparation requirements for Philips equipment indicated on these drawings is the responsibility of the customer. If an extended installation or turnkey contract exists between Philips and the customer for room preparation, then additional work required for the equipment will not be represented on these drawings. Some of the responsibilities of the customer as depicted in these drawings may be assumed by Philips. In the event of a conflict between the work described in the turnkey contract workscope and these drawings, the turnkey contract workscope shall govern.

(00.0)

PHILIPS

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

12.18.07

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AN

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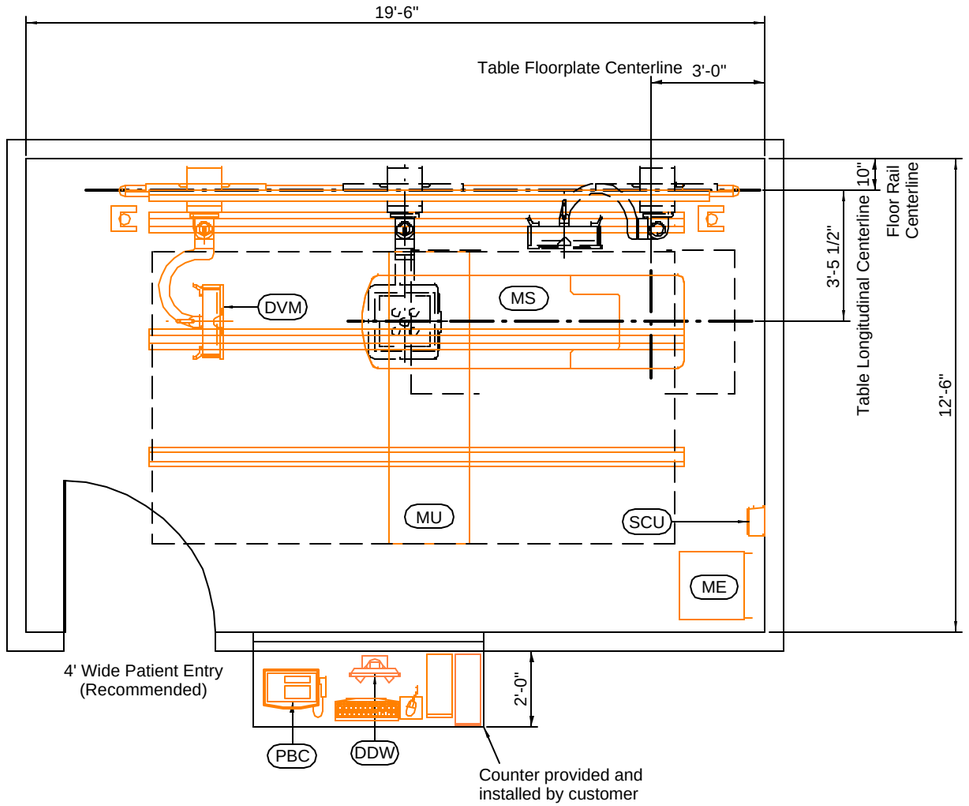

Equipment Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Option

	Equipment Designation	Description	Weight (lbs)	Heat Load (btu/hr)	Detail Sheet
A	ME	Optimus 80 Control Cabinet (40E Rack)	462	1707	AD1
A	PBC	Optimus Control Panel	9	137	AD1
A	MU	CS 2 Tube Crane w/ Cable Carrier Rail	810	1297	AD1
A	MSC	Manual Storage Cabinet	60	0	AD1
A	SCU	Segment Control Unit	14	119	AD1
A	DVM	Digital Diagnost VM (Left)	753	444	AD2
A	DDW	Digital Diagnost Workstation	176	2083	AD2
A	MS	Single Sided Table TH-S	472	341	AD2

Final location to be coordinated with the customer and architect of record.

Equipment Layout

Wall Stand	Tube Position	Minimum/Preferred Ceiling Height	Maximum Ceiling Height
Digital Diagnost VM	Upper Position	8' - 8 3/8" (2650mm)	9' - 10 1/8" (3000mm)
	Lower Position	9' - 11 3/4" (3040mm)	11' - 1 3/4" (3400mm)

Reported Existing Ceiling Height : None

Ceiling heights (from finished floor to bottom of Unistrut) other than recommended may impact equipment functionality; consult with Philips.

0 1' 2' 4' 8'

- Standard Reference Drawing -
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Digital Diagnost VM

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A1
Sheet 3 of 17

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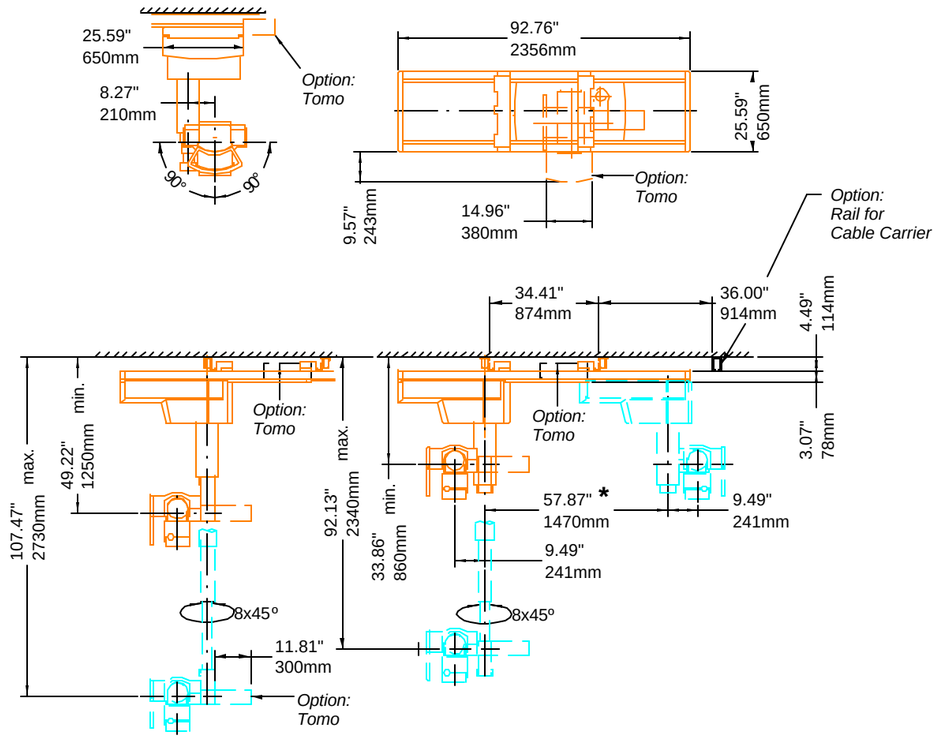
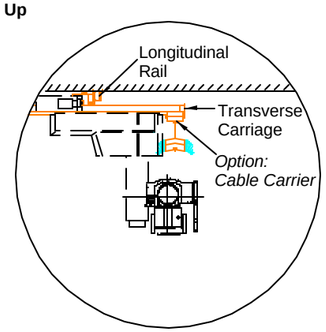


Supporting Arm Down **Supporting Arm Up**



***** Column movement range = **1260mm** (**49.61"**); standard range of 1470mm reduced by 210mm (8.28") to allow optional cable carrier to be mounted on transverse carriage.

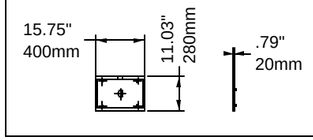
***** Optional cable carrier can be mounted on longitudinal rail, causing 210mm (8.28") of tube crane coverage loss (foot or head-end).

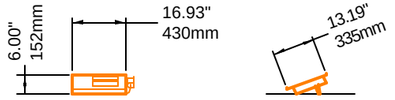
(07.1)

MU	CS 2 Tube Crane	
Weight	810 lbs	(368 kg)
Heat Dissipation	1297 Btu/hr	(326 kcal/hr)

***** Extension Rails are an additional 113lbs (51kg).

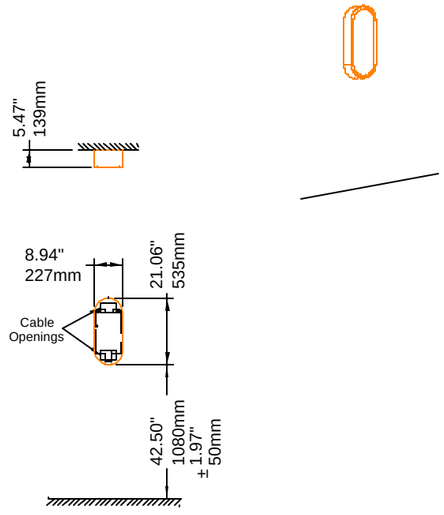
Optional Wall Mounting Bracket





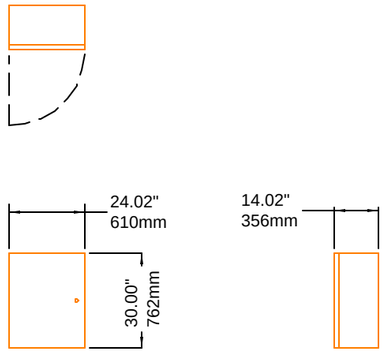
(07.0)

PBC	Optimus Control Panel	
Weight	9 lbs	(4 kg)
Heat Dissipation	137 Btu/hr	(35 kcal/hr)



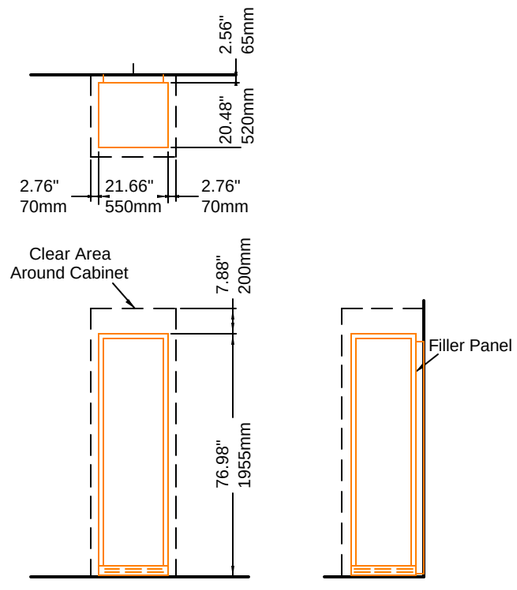
(07.0)

SCU	Segment Control Unit	
Weight	14 lbs	(6 kg)
Heat Dissipation	119 Btu/hr	(30 kcal/hr)



Max. weight of cabinet with manuals = 260 lbs. (118 kg) (03.0)

MSC	Manual Storage Cabinet	
Weight	60 lbs	(27 kg)
Heat Dissipation	0 Btu/hr	(0 kcal/hr)



(07.0)

ME	Optimus 50/65/80 Control Cabinet	
Weight	462 lbs	(210 kg)
Heat Dissipation	1707 Btu/hr	(430 kcal/hr)

PHILIPS

- Standard Reference Drawing - Not Site Specific Digital Diagnost VM

Date 12.18.07

O.A. Number

Drawn By

Quote Number

Project Number N-SRD040005

AD1

Sheet 4 of 17

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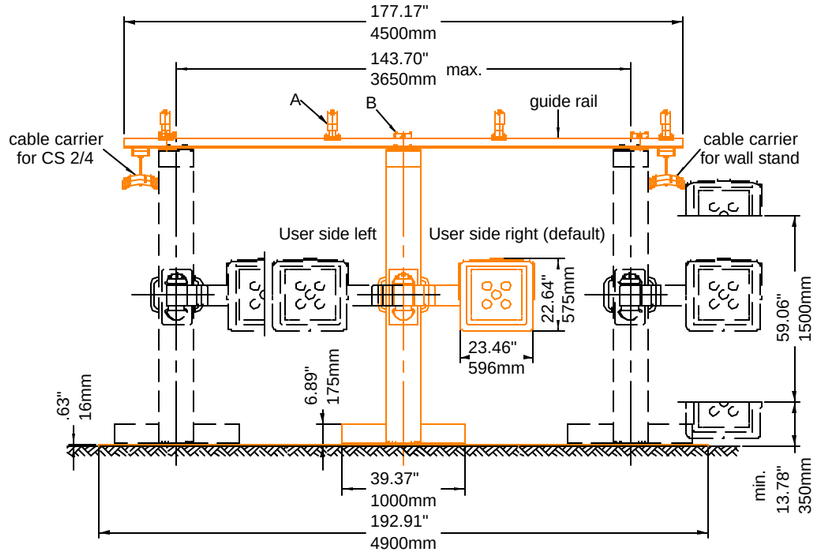
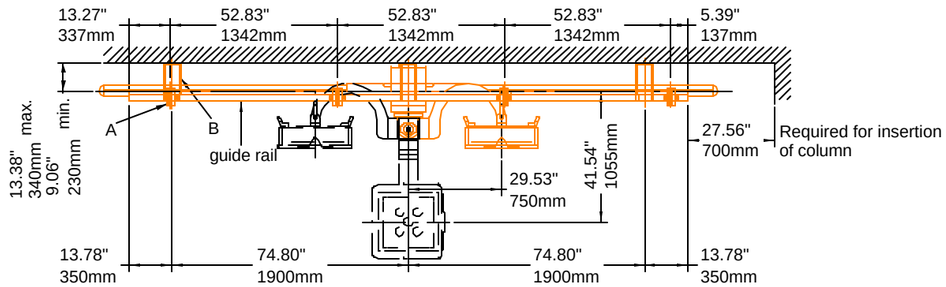
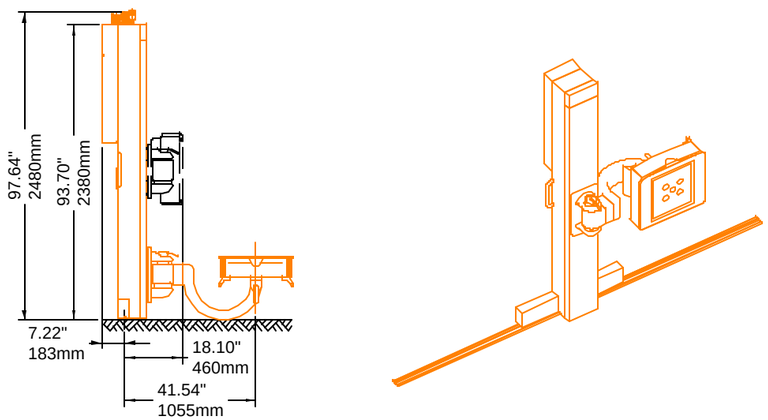


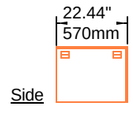


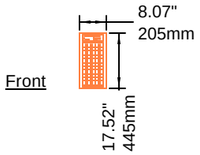


Guide rail to be supported using ceiling holders (A) OR wall holders (B)

(06.0)

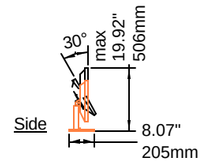
DVM	Digital Diagnost VM	
Weight	753 lbs	(342 kg)
Heat Dissipation	444 Btu/hr	(112 kcal/hr)

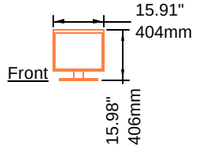




CPU (Sun Ultra 25)

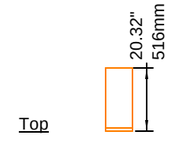
Weight: 60 lbs (27 kg)
Heat Dissipation: 1707 btu/hr (430 kCal/hr)

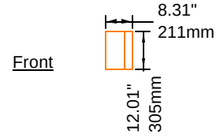




19 " LCD Color Monitor

Weight: 16 lbs (8 kg)
Heat Dissipation: 171 btu/hr (43 kCal/hr)



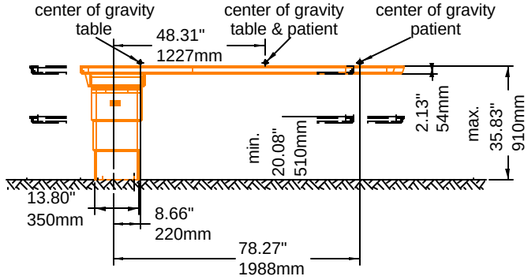


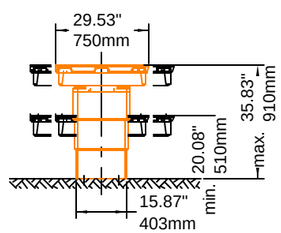
UPS

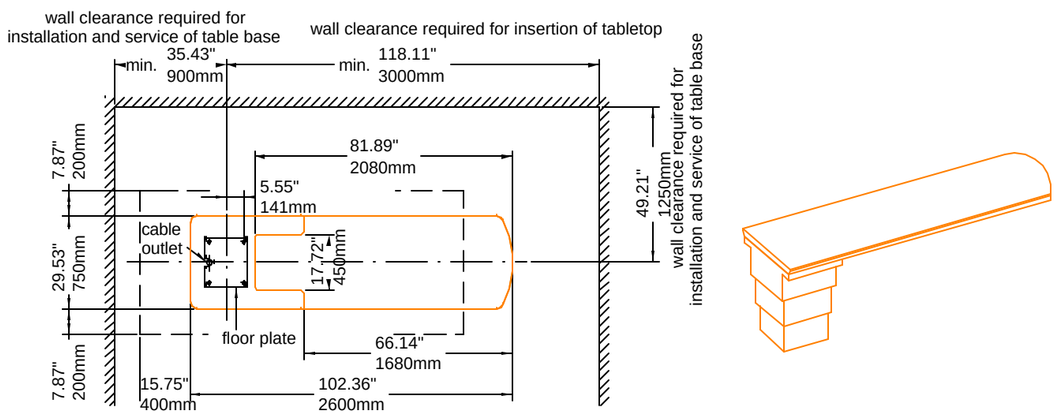
Weight: 100 lbs (46 kg)
Heat Dissipation: 205 btu/hr (93 kCal/hr)

(07.0)

DDW	Digital Diagnost Workstation	
Weight	176 lbs	(81 kg)
Heat Dissipation	2083 Btu/hr	(566 kCal/hr)







(06.0

MS	Single Sided Table TH-S	
Weight	472 lbs	(214 kg)
Heat Dissipation	341 Btu/hr	(86 kcal/hr)

- Standard Reference Drawing - Not Site Specific Digital Diagnost VM

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AD2

Sheet 5 of 17

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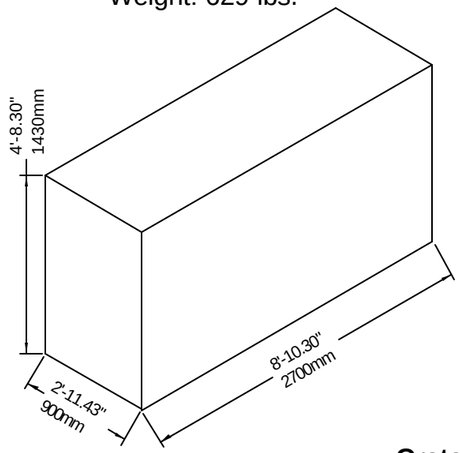
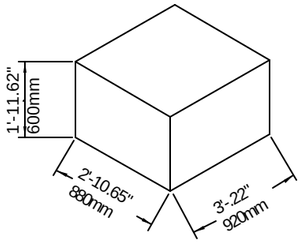
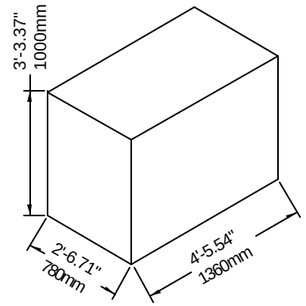
Crate A
Moveable Column
Weight: 629 lbs.



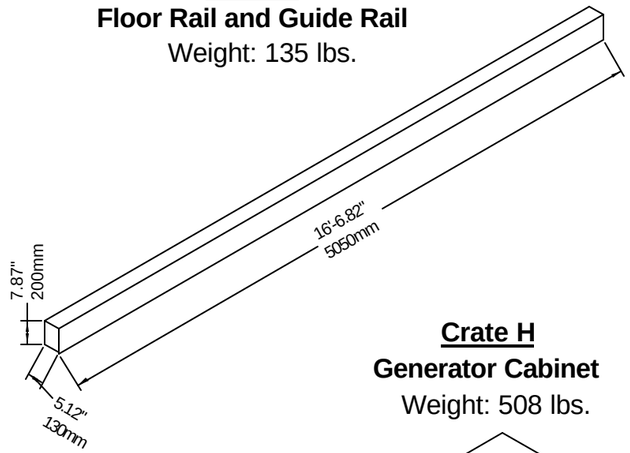
Crate B
Flat Detector
Weight: 99 lbs.



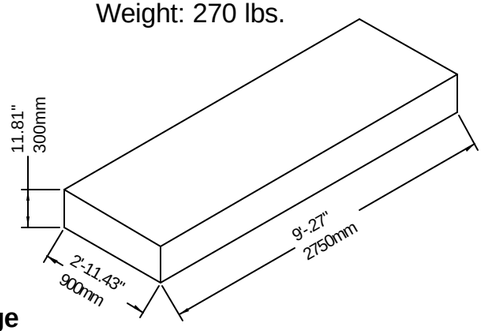
Crate C
Digital Bucky Unit with Swivelling Arm
Weight: 281 lbs.



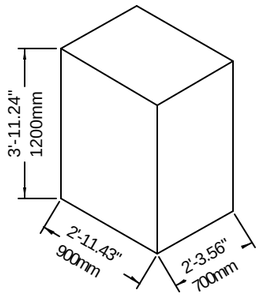
Crate D
Floor Rail and Guide Rail
Weight: 135 lbs.



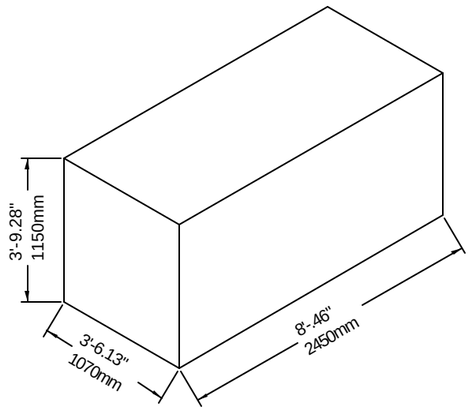
Crate E
Single Sided Table TH-S
Table Top
Weight: 270 lbs.



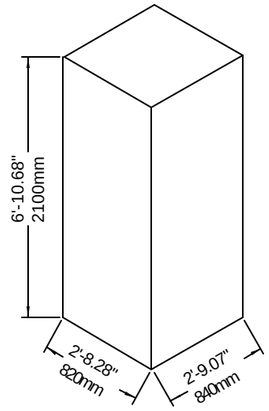
Crate F
Single Sided Table TH-S
Table Base
Weight: 450 lbs.



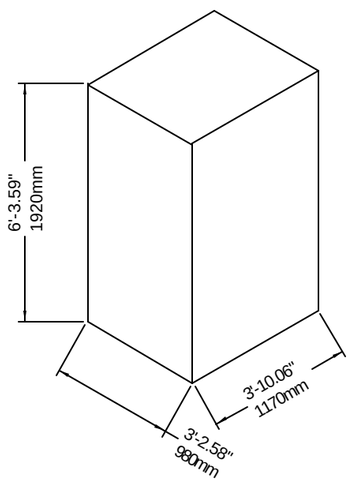
Crate G
Single Sided Trolley TF-M
Weight: 584 lbs.



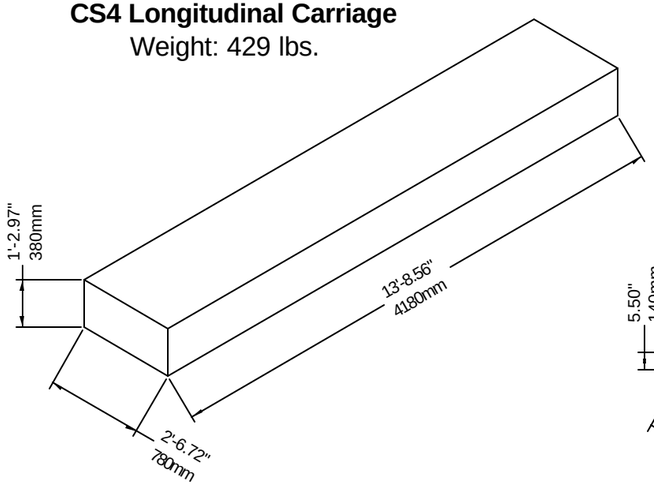
Crate H
Generator Cabinet
Weight: 508 lbs.



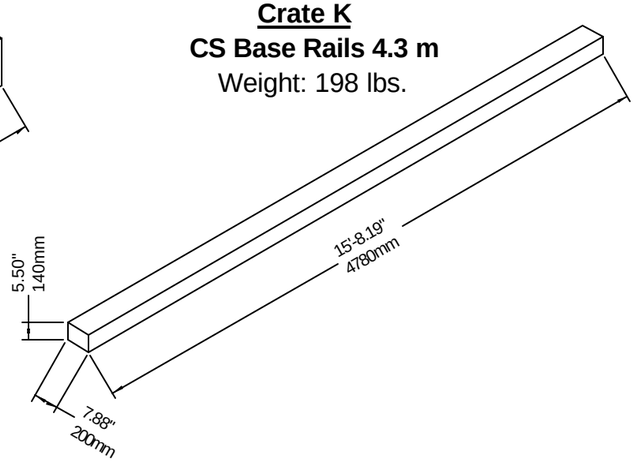
Crate I
CS4 Transverse Carriage
Weight: 562 lbs.
Tomography (option)
Additional Weight: 67 lbs.



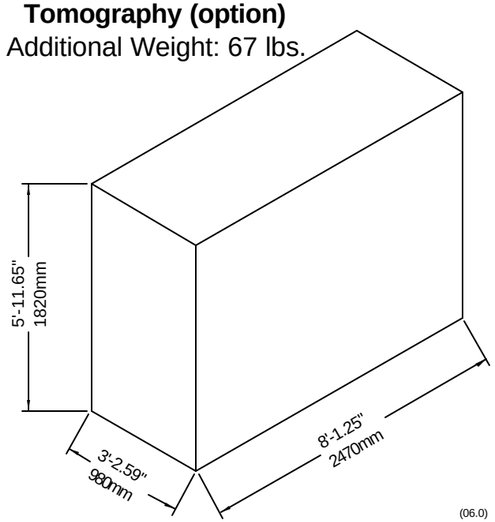
Crate J
CS4 Longitudinal Carriage
Weight: 429 lbs.



Crate K
CS Base Rails 4.3 m
Weight: 198 lbs.



Crate L
CS2 Complete
Weight: 931 lbs.
Tomography (option)
Additional Weight: 67 lbs.



(06.0)

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

Drawn By	Date	O.A. Number
	Quote Number	
Project Number		
N-SRD040005		

AD3
Sheet 6 of 17

THE INFORMATION IN THIS PACKAGE IS PROVIDED AS A CUSTOMER CONVENIENCE, AND IS NOT TO BE CONSTRUED AS ARCHITECTURAL DRAWINGS OR CONSTRUCTION DOCUMENTS.
Philips assumes no liability nor offers any warranty for the fitness or adequacy of the premises or the utilities available at the premises in which the equipment is to be installed, used, or stored.
12.18.07

Equipment Support Information

1. General
The customer shall be solely responsible, at its expense, for preparation of the site, including any required structural alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and building codes. The customer shall be solely responsible for obtaining all construction permits from jurisdictional authority.

2. Equipment Anchorage
Philips provides, with this plan and specifications, information relative to equipment size, weight, shape, anchoring hole locations and forces which may be exerted on anchoring fasteners. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of equipment anchoring to floors, wall and/or ceiling of the building. Any anchorage test required by local authority shall be the customer's responsibility. Stud type anchor bolts should not be specified as they hinder equipment removal for service. Consult with Philips service prior to specifying anchor methods.

3. Floor Loading and Surface
Philips provides, with this plan and specifications, information relative to size, weight and shape of floor mounted equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings confirmation of the structural adequacy of the floor upon which the equipment will be placed. Any load test required by local authority, shall be the customer's responsibility.
The floor surface upon which Philips equipment is to be placed/anchored shall be flat and level to within plus or minus 1/16 inch (2mm) over a length of 39" (1m).

4. Ceiling Support Apparatus
Philips provides, with this plan and specifications, information relative to size, weight and shape of ceiling supported equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of structural support apparatus, fasteners and anchorage to which Philips will attach equipment. Any anchorage and/or load test required by local authority shall be the customer's responsibility.

Contractor to clearly mark Philips equipment longitudinal centerline on bottom of each structural support.

The structural support apparatus surface to which Philips equipment is to be attached, shall have horizontal equipment attachment surfaces parallel, square and level to within plus or minus 1/16 inch (2mm).

Any drilling and/or tapping of holes required to attach Philips equipment to the structural support apparatus shall be the responsibility of the customer.

Fasteners/anchors (i.e., bolts, spring nuts, lock and flat washers) and strip closures shall be provided by the customer.

5. Lighting
Lighting fixtures shall be placed in such a position that they are not obscured by equipment or its movement, nor shall they interfere with Philips ceiling rails and equipment movement or otherwise adversely affect the equipment. Such lighting fixture locations shall be the sole responsibility of the customer.

6. Ceiling Obstructions
There shall be no obstructions that project below the finished ceiling in the area covered by ceiling suspended equipment travel.

7. Seismic Anchorage (For Seismic Zones Only)
All seismic anchorage hardware, including brackets, backing plates, bolts, etc., shall be supplied and installed by the customer/contractor unless otherwise specified within the support legend on this sheet. Installation of electronic cabinets to meet seismic anchorage requirements must be accomplished using flush mounted expansion type anchor/bolt systems to facilitate the removal of a cabinet for maintenance. Do not use threaded rod/adhesive anchor systems. Consult with Philips regarding any anchor system issues.

8. Floor Obstructions/ Floor Coverings
There shall be no obstructions on the floor (sliding door tracks, etc.) in front of the Philips technical cabinets. Floor must be clear to allow cabinets to be pulled away from the wall for service.

Contractor to verify with Philips the preferred floor covering installation method.

(05.0)

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

Drawn By | Date
Quote Number | O.A. Number
Project Number N-SRD040005

SN
Sheet 7 of 17

THE INFORMATION IN THIS PACKAGE IS PROVIDED AS A CUSTOMER CONVENIENCE, AND IS NOT TO BE CONSTRUED AS ARCHITECTURAL DRAWINGS OR CONSTRUCTION DOCUMENTS.
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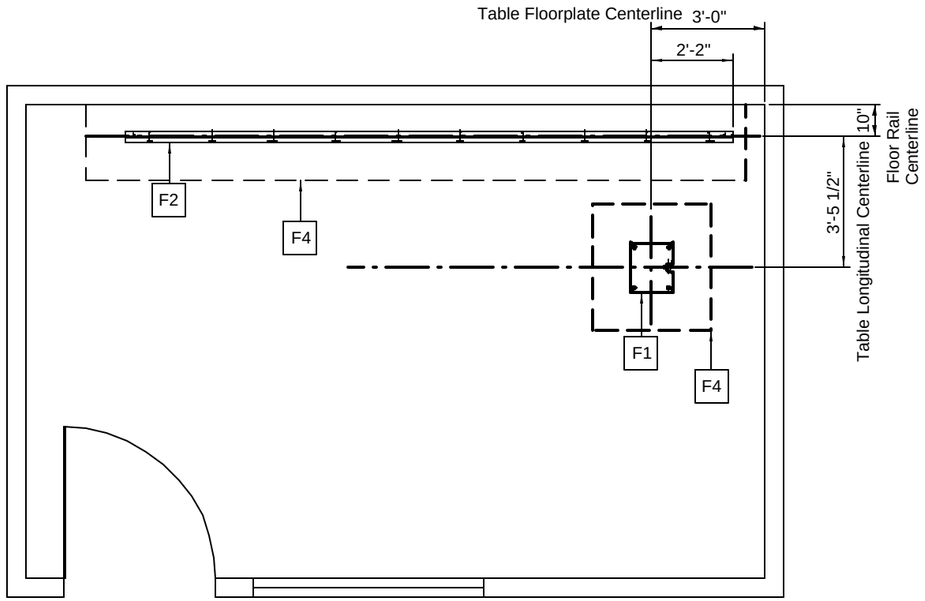


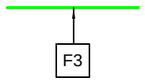
Floor Support Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G

Item Number | Description | Detail Sheet

D	F1	Single Sided Table TH-S Flush Mounted Floorplate	SD2
B	F2	Digital Diagnost VM Floor Rail Anchorage	SD1
B	F3	Manual Storage Cabinet Anchorage	SD2
B	F4	Floor must be level within this area - See note "3. Floor Loading and Surface" on sheet SN	SN
B	F5	Segment Control Unit Anchorage (not shown)	SD1

CUSTOMER / CONTRACTOR SHALL RECOMMEND
AND / OR PROVIDE EQUIPMENT ANCHORING SYSTEMS
(I.E. "HILTI", "REDHEAD", ETC) BASED UPON SPECIFIED
"PULL" FORCES AND WALL / CEILING / FLOOR COMPOSITIONS.



Final location to be coordinated with the customer and architect of record.

All dimensions must be off the final finished wall.

If a wall is furred out to hide electrical duct or boxes, the dimensions included in this plan must come off the finished furred wall.

Floor Support Layout

Wall Stand	Tube Position	Minimum/Preferred Ceiling Height	Maximum Ceiling Height
Digital Diagnost VM	Upper Position	8' - 8 3/8" (2650mm)	9' - 10 1/8" (3000mm)
	Lower Position	9' - 11 3/4" (3040mm)	11' - 1 3/4" (3400mm)

Ceiling heights (from finished floor to bottom of Unistrut) other than recommended may impact equipment functionality; consult with Philips.

0 1' 2' 4' 8'

PHILIPS

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

12.18.07

Date | O.A. Number
Drawn By | Quote Number
Project Number N-SRD040005

S1
Sheet 8 of 17

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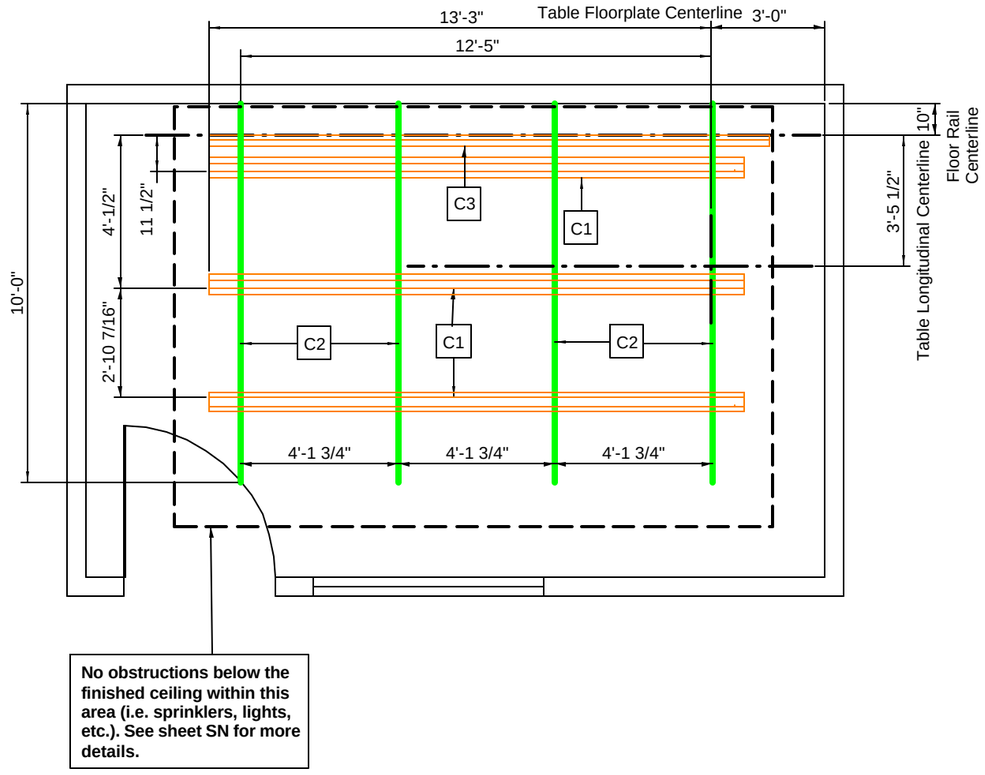

No obstructions below the finished ceiling within this area (i.e. sprinklers, lights, etc.). See sheet SN for more details.

Ceiling Support Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G

Item Number | Description | Detail Sheet

A	C1	Philips Equipment Rails	SD2
B	C2	Unistrut (P1001 or equal) mounted flush with finished ceiling	SD2
A	C3	Philips Equipment Guide Rail	SD1 /SD2

CUSTOMER / CONTRACTOR SHALL RECOMMEND
AND / OR PROVIDE EQUIPMENT ANCHORING SYSTEMS
(I.E. "HILTI", "REDHEAD", ETC) BASED UPON SPECIFIED
"PULL" FORCES AND WALL / CEILING / FLOOR COMPOSITIONS.

All dimensions must be off the final finished wall.

If a wall is furred out to hide electrical duct or boxes, the dimensions included in this plan must come off the finished furred wall.

Ceiling Support Layout

Wall Stand	Tube Position	Minimum/Preferred Ceiling Height	Maximum Ceiling Height
Digital Diagnost VM	Upper Position	8' - 8 3/8" (2650mm)	9' - 10 1/8" (3000mm)
	Lower Position	9' - 11 3/4" (3040mm)	11' - 1 3/4" (3400mm)

Ceiling heights (from finished floor to bottom of Unistrut) other than recommended may impact equipment functionality; consult with Philips.

0 1' 2' 4' 8'

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

Date | O.A. Number
Drawn By | Quote Number
Project Number N-SRD040005

S2
Sheet 9 of 17

THIS DRAWING IS NOT TO BE CONSTRUED AS ARCHITECTURAL DRAWINGS OR CONSTRUCTION DOCUMENTS. 12.18.07
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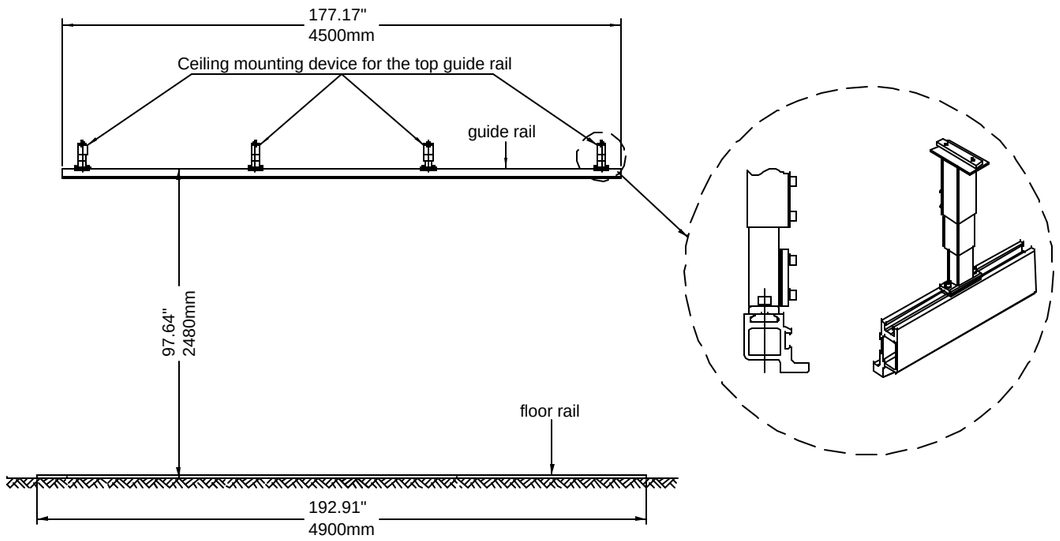
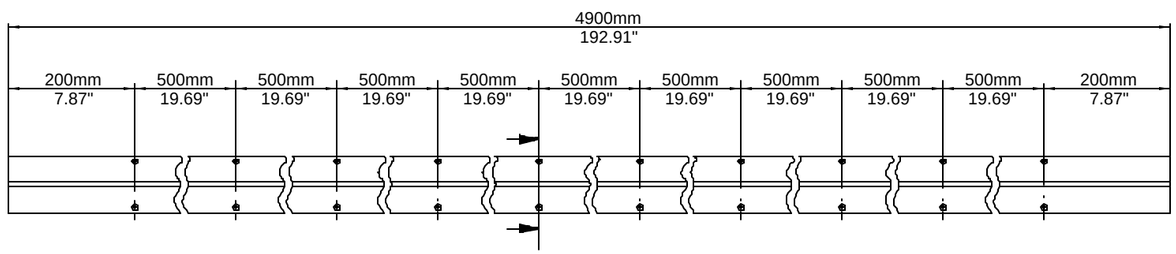


Ceiling Height	Required Ceiling Holder	Part Number
104.33" (2650mm) - 105.55" (2681mm)	Short	4512 201 0218x
105.51" (2680mm) - 113.94" (2894mm)	Medium	4512 201 0219x
113.70" (2888mm) - 137.40" (3490mm)	Long	4512 201 0220x

Floor rail detail

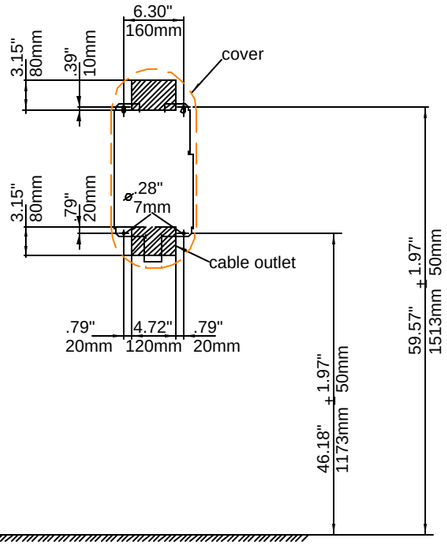


*Drawing not to scale

Detail - Digital Diagnost VM Floor Rail & Guide Rail Support (w/ ceiling holders) (07.0)

Bolt Forces:
T max (Tension)(ceiling) = 870 lbs/bolt
V max (Shear)(ceiling) = 174 lbs/bolt
V max (Shear)(floor) = 180 lbs/bolt

F2 C3



** Not to scale

Weight of Segment Control box:
14 lbs. (10 kg.)

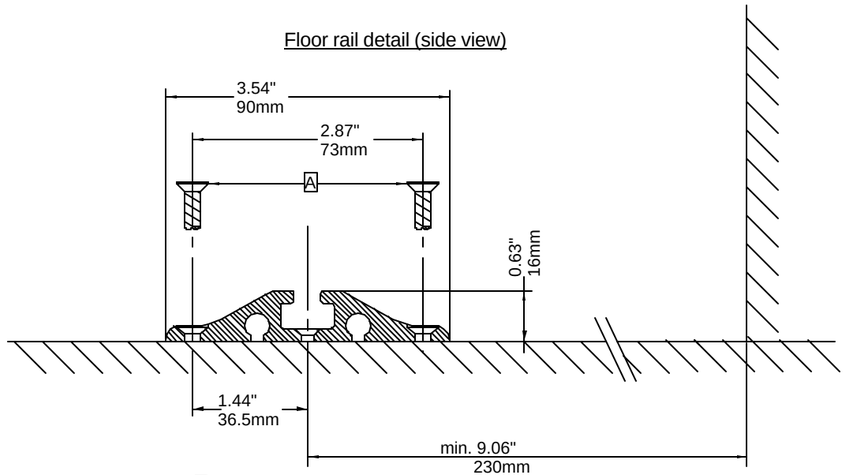
Recommended fixation:
4 mm x 8 mm dowel
4 mm x 6 mm screws, length >50 mm

Digital Diagnost VS Segment Control Unit
Wall Mounting Detail (04.0)

The customer's architect/engineer of record shall specify a wall backing plate sufficient for the bolt forces shown.

F5

Floor rail detail (side view)



A - Phillips screw 5 x 60 + 8 mm (or equivalent) dowels for concrete floors

CUSTOMER / CONTRACTOR SHALL RECOMMEND AND / OR PROVIDE EQUIPMENT ANCHORING SYSTEMS (I.E. "HILTI", "REDHEAD", ETC) BASED UPON SPECIFIED "PULL" FORCES AND WALL / CEILING / FLOOR COMPOSITIONS.

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

Date | O.A. Number
Drawn By | Quote Number
Project Number N-SRD040005

SD1
Sheet 10 of 17

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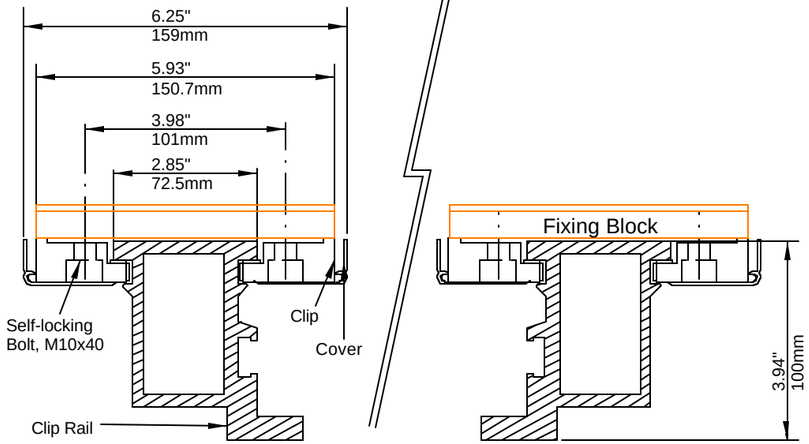
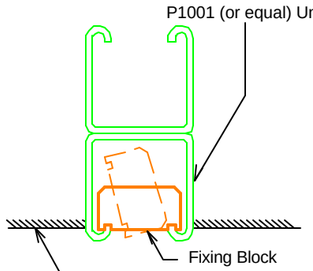


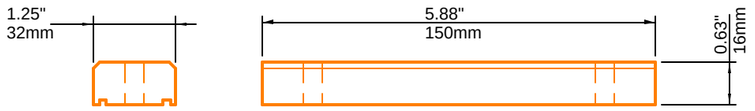
Detail - Clip Rail Cross-section



* Philips does not specify the overhead equipment support structure. Unistrut (or equal) may or may not be used. If Unistrut are used, it is up to Unistrut and the structural engineer for the project to determine which of it's products are appropriate for each project. P1001 Unistrut may not be appropriate given the equipment weight on a specific project.

* Finished ceiling must **NOT** be lower than the bottom of the Unistrut in order to prevent damage to the finished ceiling during the installation of clip rails.

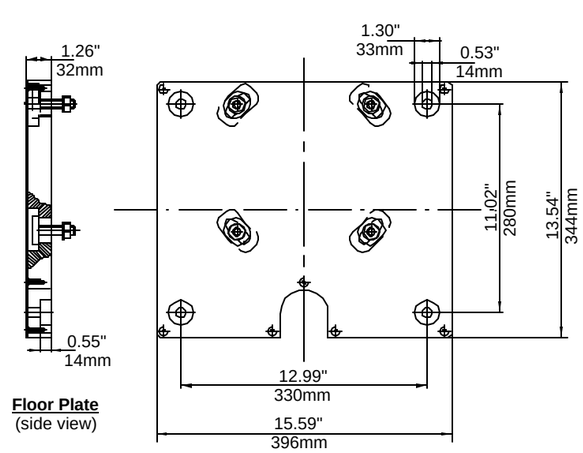
* Nothing shall be attached to the Unistrut with any fastener that protrudes into the unistrut which would interfere with positioning of the fixing block.



Detail - Fixing Block for Philips Ceiling Rails (Clip Rails)

Tube Crane Support Forces	Without Tomo Option	With Tomo Option	With Trauma Attachment
CS2	(Tension) **T**max = 794 lbs/support (Shear) **V**max = 134 lbs/support	(Tension) **T**max = 891 lbs/support (Shear) **V**max = 149 lbs/support	(Tension) **T**max = 1106 lbs/support (Shear) **V**max = 158 lbs/support
CS4	(Tension) **T**max = 686 lbs/support (Shear) **V**max = 160 lbs/support	(Tension) **T**max = 756 lbs/support (Shear) **V**max = 175 lbs/support	(Tension) **T**max = 887 lbs/support (Shear) **V**max = 184 lbs/support

C1 C2 C3 (07.2)



Floor Plate
(side view)

Floor Plate*
(top view)

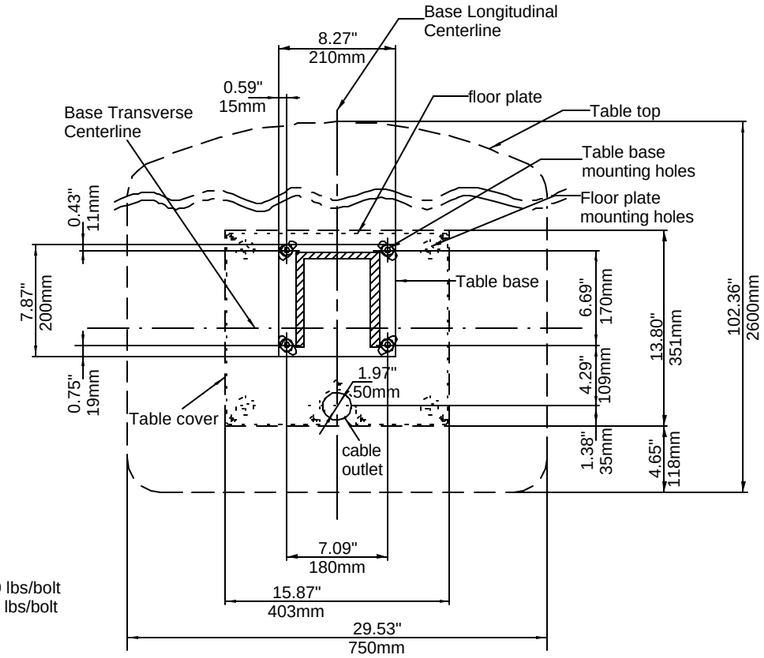


Table Base
(top view)

Mount tablebase to floorplate:

Bolt Forces:
T max (Tension) = 3377 lbs/bolt
V max (Shear) = 735 lbs/bolt

Mount floorplate to floor:

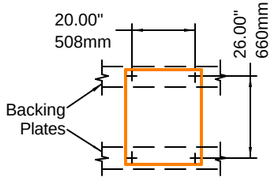
Bolt Forces:
T max (Tension)(floor) = 2040 lbs/bolt
V max (Shear)(floor) = 506 lbs/bolt

* **NOTE:** Floorplate must be mounted flush with the finished floor

Drawings Not to Scale

F1 (07.0)

Detail - Single Sided TH-S Table Base and Floor Plate



Bolt Forces:
(Tension) **T**max = 107 lbs/bolt
(Shear) **V**max = 146 lbs/bolt

Manual Storage Cabinet Mounting Detail

The customer's architect/engineer of record shall specify a wall backing plate sufficient for the bolt forces shown.

F3 (07.0)

- Standard Reference Drawing - Not Site Specific Digital Diagnost VM

Date 12.18.07

O.A. Number

Drawn By

Quote Number

Project Number N-SRD040005

SD2

Sheet 11 of 17

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General Electrical Information

1. General
The customer shall be solely responsible, at its expense, for preparation of the site, including any required electrical alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and electrical codes, the customer shall be solely responsible for obtaining all electrical permits from jurisdictional authority.

2. Materials and Labor
The customer shall be solely responsible, at its expense, to provide and install all electrical ducts, boxes, conduit, cables, wires, fittings, bushing, etc., as separately specified herein.

3. Electrical Ducts and Boxes
Electrical ducts and boxes shall be accessible and have removable covers. Floor ducts and boxes shall have watertight covers. Ducts shall be divided into as many as three separate channels by metal dividers, separately specified herein, to separate wiring and/or cables into groups as follows: Group a, power wiring and/or cables. Group b: signal and/or data and protective ground wiring and/or cables. Group c: x-ray high voltage cables, the use of 90 deg. ells is not acceptable. On ceiling duct and wall duct use 45 deg. bends at all corners. All intersecting points in duct to have cross over tunnels supplied and installed by contractor to maintain separation of cables.

4. Conduit
Conduit point - to - point runs shall be as direct as possible. Empty conduit runs used for cables may require pull boxes located along the run. Consult with Philips. A pull wire or cord shall be installed in each conduit run. All conduits which enter duct prior to their termination point must maintain separation from other cables via use of dividers, cross over tunnels, or flex conduit supplied and installed by contractor from entrance into duct to exit from duct.

5. Conductors
All conductors, separately specified, shall be 75° c stranded copper, rung out and marked.

6. Disconnecting Means
A disconnecting means shall be provided as separately specified.

7. Warning Lights and Door Switches
"X-Ray On" warning lights and x-ray termination door switches should be provided at all entrances to x-ray rooms as required by code.

8. Dimmer Switches
X-ray room lights should be provided with dimmer switches.

(02.0)

Electrical Notes

1. The contractor will supply & install all breakers, shunt trip and incoming power to the breakers. The exact location of the breakers and shunt trips will be determined by the architect or contractor.

2. The contractor shall supply & install all pull boxes, raceways, conduit runs, stainless steel covers, etc. Conduit/raceways must be free from burrs and sharp edges over its entire length. A Greenlee pull string/measuring tape (part no. 435, or equivalent) shall be provided with conduit runs.

3. All pre - terminated, cut to length cables, will be supplied and installed by Philips Medical Systems. All cables to the breakers, will be supplied and installed by the contractor, subject to local arrangements.

4. Provide and install 4 - 2" (50 mm) dia. Chase nipples between adjacent wall boxes where applicable.

5. Electrical raceway shall be installed with removable covers. The raceway should be accessible for the entire length. In case of non - accessible floors, walls and ceilings, an adequate number of access hatches should be supplied to enable installation of cabling. Approved conduits may be substituted. All raceways will be designed in a manner that will not allow cables to fall out of the raceway when the covers are removed. In most cases, this will require above - ceiling raceway to be installed with the covers removable from the top. Raceway system as illustrated on this drawing are based upon length of furnished cables. Any changes in routing of raceway system could exceed maximum allowable length of furnished cables. Conduit or raceway above - ceiling must be kept as near to finished ceiling as possible.

6. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or National Electrical Codes, whichever govern.

7. Convenience outlets are not illustrated. Their number and location are to be specified by the customer/architect.

8. All sections of raceway and conduit shall be grounded with an independent #6 a.w.g.green wire that is to be attached using solderless lugs. All ceiling mounted structural support members and ceiling plates shall also be grounded. All grounding connections, terminals, etc. Shall be installed in a manner to provide accessibility for inspection, maintenance, repair, etc.

(99.0)

Electrical Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G

Item Number | Description | Detail Sheet

	Item Number	Description	Detail Sheet
B	CB	480V, 3 phase 100 AMP circuit breaker with shunt trip and load side pressure lugs for #2 A.W.G. extra-flexible cable (T+B type 31009 "locktight" or similar). Run power from breaker to wall box "ME" leaving an 8' tail. See sheet "ED1" for power quantity requirements. Location per local code or owner requirements. Coordinate with local Philips service.	ED1
B	ST	Shunt trip (emergency off) - large mushroom-head button on remote control station with contacts to operate feature of "CB." (if required by local code or owner, and mandatory for VA and D.O.D. installations). Its location must be within easy reach but not subject to an accidental bump. Exact location to be determined by customer or coordinated with local Philips Service. (Not shown on plan)	
D	ME	19 1/4"W x 67"H x 4"D flanged-edge terminal wall box with removable screw-type cover plate, surface mounted 75" A.F.F. to top of box. Conduits to terminate on top & sides of the box as required.	ED1
B	PBC	6"W x 6"L x 4"D pull box with removable screw-type cover plate, surface mounted 22" A.F.F. to bottom of box. Location shown is recommended and may be changed - verify relocation with local Philips Service.	
B	SCU	Grommetted opening on "WR1". Exact size to be determined in field. Modify cover of Segment Control Unit as needed.	
B	MS	8"W x 8"L x 6"D floor box with removable gasketted screw-type cover plate. Top of box to be mounted 1.26" below finished floor to accommodate flush mounted TH-S floor plate .	
B	MU, DVM	8"W x 8"L x 6"D ceiling box flush mounted with removable screw-type cover plate.	
B	DDW	6"W x 6"L x 4"D pull box with removable screw-type cover plate, surface mounted 22" A.F.F. to bottom of box. Location shown is recommended and may be changed - verify relocation with local Philips Service.	
B	WL	Warning light - provide an incandescent surface or flush mounted light fixture above door to indicate when X-Ray is on. Provide a 115V, 15A normally open relay in this fixture. (Not shown on plan)	ED1
B	DS	Door switch - 120V, 5A switch limited to open when door is open. Mount in upper corner on strike side of main entry door(s) (Cooper no. 1665 or equivalent), if required by local code or physicist of record. (Not shown on plan)	ED1
B		120 V / 20 A dedicated duplex outlet. Coordinate exact location with local Philips Service. (For Digital Diagnost Workstation "DDW")	
B	WR1	6"W x 3 1/2"D wall raceway with removable screw-type cover plate, surface mounted 63.5" A.F.F. to bottom of raceway from side of "ME" to Segment Control Unit.	E2
B	N	RJ45 type ethernet 10/100/1000 Mbit network connector. Access through customer's network to VPN device capable of connecting to the Philips Remote Service Network (RSN) Datacenter is needed. Refer to page N1 for RSN connectivity options. Locate within 10' of network card. Network Fiber optic and ethernet cabling, connectors, wall boxes, patch panels, etc, are the responsibility of the purchaser. Philips assumes no responsibility for procurement, installation, or maintenance of the components.	N1

PHILIPS

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

12.18.07

Drawn By | Date | Quote Number | O.A. Number

Project Number
N-SRD040005

EN
Sheet 12 of 17

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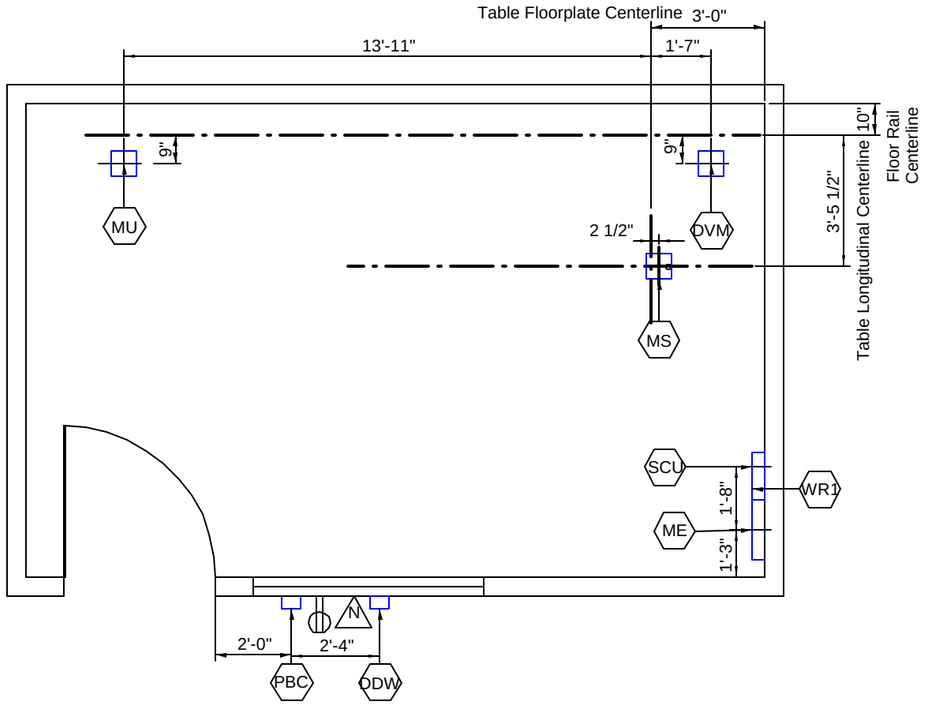
Refer to electrical legend - Sheet EN



Electrical Layout

Wall Stand	Tube Position	Minimum/Preferred Ceiling Height	Maximum Ceiling Height
Digital Diagnost VM	Upper Position	8' - 8 3/8" (2650mm)	9' - 10 1/8" (3000mm)
	Lower Position	9' - 11 3/4" (3040mm)	11' - 1 3/4" (3400mm)

Ceiling heights (from finished floor to bottom of Unistrut) other than recommended may impact equipment functionality; consult with Philips.

0 1' 2' 4' 8'

All dimensions must be off the final finished wall.

If a wall is furred out to hide electrical duct or boxes, the dimensions included in this plan must come off the finished furred wall.

Conduit Required

General Notes

1. All conduit runs must take most direct route point to point.
2. All conduit runs must have a pull string.

A Conduit supplied/installed by contractor - Philips cables installed by Philips
B Conduit supplied/installed by contractor - Philips cables installed by contractor
C Conduit and cables supplied and installed by contractor
D Conduit existing - cables supplied and installed by Philips
E Conduit existing - cables supplied by Philips, installed by contractor
F Conduit existing - cables supplied and installed by contractor

* P Power / Ground Cables
S Signal Cables
V Video Cables
H High Tension Power Cables
F Fiber Optic

	Conduit Run No.	Conduit From	Conduit To	Conduit Quantity (* Cable Type)	Minimum Conduit Size	Default Conduit Length	Special Requirements
C	1	CB	Power Panel	1 (P)	per NEC	per NEC	
B	2	CB	ME	1 (P)	2"	50'	
C	3	CB	ST	1 (P)	3/4"	50'	
C	4	ME	WL	1 (P)	1/2"	50'	
C	5	ME	DS	1 (P)	1/2"	50'	
A	6	ME	PBC	1 (P)	2"	65'	
A	7	ME	PBC	1 (S)	2"	65'	
A	8	ME	MS	1 (P)	1/2"	52'	Grounding
A	9	ME	DVM	1 (S)	2"	65'	Max. conduit length = 59' (each conduit) if DVM2.
A	10	ME	DVM	1 (P)	2"	65'	Grounding
A	11	ME	MU	1 (S)	2 1/2"	32'	
A	12	ME	MU	1 (H)	2 1/2"	32'	
A	13	ME	ODW	1 (S)	1 1/2"	65'	
A	14	DVM	ODW	1 (S)	1 1/2"	78'	Max. conduit length = 72' if DVM2.
A	15	DVM	ODW	1 (F)	1/2"	78'	
A	16	ME	MS	1 (S)	2"	32'	
A	17	ME	MS	1 (P)	2"	32'	
A	18	ME	DVM	1 (P)	2"	65'	Max. conduit length = 59' (each conduit) if DVM2.
A	19	ME	DVM	1 (S)	2"	65'	
A	20	ME	ODW	1 (S)	1 1/2"	65'	
A	21	ME	MU	1 (S)	1 1/2"	52'	Runs #16 - #22 are for cables to/from SCU. (Routed via ME and WR.)
A	22	ME	MU	1 (P)	1 1/2"	52'	

PHILIPS

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

Date
O.A. Number
Drawn By
Quote Number
Project Number
N-SRD040005

E1
Sheet 13 of 17

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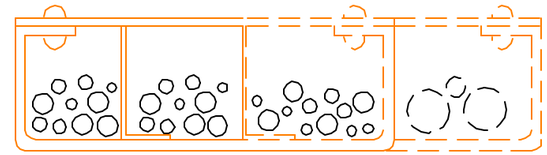
12.18.07

Cable Trough Divisions

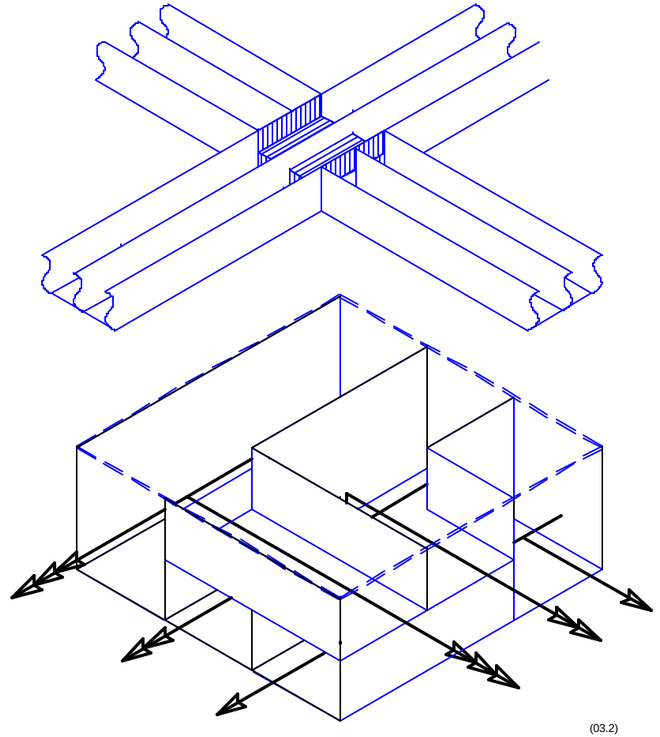
Troughs or ducts must be separated by metal barriers into three sections:

1. High voltage (H.T.) cables to be run separately from all other cables.
2. Power cables and ground cables can be run together.
3. Signal cables and data cables can be run together but must be separated from power cables.
4. Video cables to be run separately from all other cables.



5. It is important that all cables are placed in the appropriate trough and at no given point do any cables from one division cross with cables from another. Trough separation must be continuous from the beginning to the end of the run. Utilize crossover tunnels as appropriate - please see example below
6. Trough or ducts: steel with steel dividers grounded to building ground.
7. Contractor to provide cable restraints in all troughs.
8. No cables, except cables to & from the generator rack (ME) and transfomer, must pass through the 20" (500mm) exclusion zone around the generator rack. (For interventional procedures only)

Crossover Example



(03.2)

WR1

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Date

O.A. Number

Drawn By

Quote Number

Project Number
N-SRD040005

E2
Sheet 14 of 17

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CB

Power Quality Requirements

Optimus 80 / Optimus C

Power Output:	80 KW
Supply Configuration:	3 phase, 3 wire power and ground, Delta or wye
Nominal Line Voltage:	400, 440, 460, or 480 VAC, 60 Hz
Line Voltage Variation:	± 8% steady-state
Line Voltage Balance:	2% maximum of nominal voltage between phases
Frequency Variation:	± 1% (± 0.6 Hz)
Voltage Surges:	To 110% of steady-state voltage 100 msecs. Maximum duration, 6 per hour maximum
Voltage Sags:	To 90% of steady-state voltage 100 msecs. Maximum duration, 6 per hour maximum
Line Impulses:	1000 VPK above phase-neutral RMS absolute maximum. No more than 1 impulse per hour to exceed 500 VPK.
Neutral-ground Voltage:	2.0 volts maximum RMS value
Neutral-ground Impulses:	No more than 1 per hour that exceeds 25 volts and 1 Mjoule
High Frequency noise:	3.0 volts steady-state maximum. Over 3.0 volts permitted for 100 msec. maximum, 1 per hour maximum.
Ground and Neutral Conductor Impedance:	0.1 Ohms @ 60 Hz maximum

Branch Circuit and Wire Gauge Requirements

Optimus 80 / Optimus C

Branch Power:	150 KVA
Circuit Breaker:	3 pole, 100 amperes (@ 480V)
Maximum Instantaneous Power:	158 KVA (800 MA @ 100 KV) (Short-term) <8 Amps (Stand-by/Long-term)

Recommended conductor sizes for 1% impedance of branch conductors.
Based on 20°C copper conductors:

	400 VAC	440 VAC	460 VAC	480 VAC
#1 AWG	66.9 ft.	79 ft.	87 ft.	96 ft.
1/0 AWG	84.3 ft.	100 ft.	110 ft.	121 ft.
2/0 AWG	106 ft.	126 ft.	139 ft.	152 ft.
3/0 AWG	133 ft.	159 ft.	175 ft.	192 ft.
4/0 AWG	169 ft.	201 ft.	221 ft.	242 ft.
250 MCM	199 ft.	230 ft.	261 ft.	287 ft.
300 MCM	239 ft.	285 ft.	313 ft.	344 ft.
400 MCM	399 ft.	380 ft.	418 ft.	459 ft.
500 MCM	359 ft.	476 ft.	522 ft.	574 ft.
Inst. Current	228 A	210 A	200 A	190 A
Max. Phase-phase Impedance	0.2 Ω	0.2 Ω	0.2 Ω	0.2 Ω
Max. Load Voltage Drop	45.6 V	42.0 V	40.0 V	38.0 V
Percent Regulation at Maximum Load	11.4 %	9.5 %	8.7 %	7.9 %

Minimum copper wire size, circuit breaker to equipment: #2

(06.0)

CB

Eletrical Requirement Notes

Electrical power distribution at the facility shall comply with:

Utilization voltages per ANSI C84.1 - 1982 range A.

Voltage to be supplied is 3 phase, 3 wire power and ground (delta or wye) unless otherwise noted in equipment specifications.

Phase conductors to be sized for instantaneous voltage drop per NEC 517 - 73 and Philips recommendations.

Neutral and ground conductors to be sized equivalently to phase conductors, unless otherwise noted.

Metal conduit shall not be used as the equipment ground conductor.

Clamping type surge suppressors are highly recommended in addition to standing facility lighting arrestors. Equipment to be protected from ANSI/IEEE C62.41-1980 location category B impulses.

ANSI / NFPA 70 - National Electrical Code
Article 250 - grounding
Article 517 - health care facilities

ANSI / NFPA 99 - health care facilities

NEMA standard XR0 - power supply guideline for x-ray machines

Power Quality Guidelines

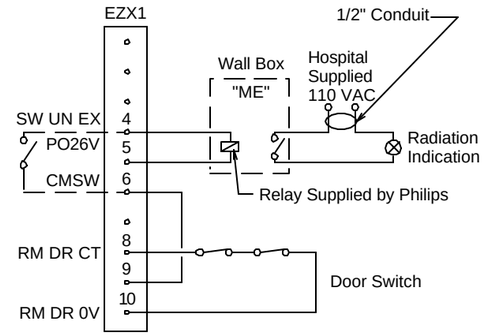
1. Power supplied to medical imaging equipment must be separate from power feeds to air conditioning, elevators, outdoor lighting, and other frequently switched or motorized loads. Such loads can cause waveform distortion and voltage fluctuations that can hinder high quality imaging.

2. Equipment that utilizes the facility power system to transmit control signals (especially clock systems) may interfere with medical imaging equipment, thus requiring special filtering.

3. The following devices provide a high impedance, nonlinear voltage source, which may affect image quality:
Static UPS systems, Series filters, Power conditioners, and Voltage regulators.

Do not install such devices at the mains supply to medical imaging equipment without consulting Philips installation or service personnel.

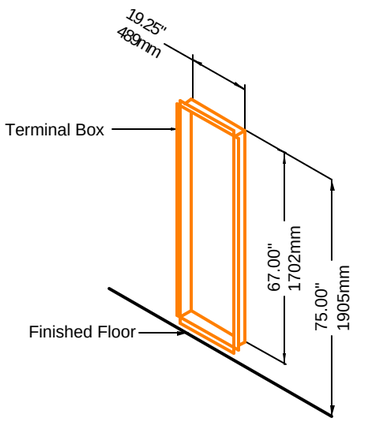
4. Line impedance is the combined resistance and inductance of the electrical system and includes the impedence of the power source, the facility distribution system, and all phase conductors between the source and the imaging equipment. Philips publishes recommended conductor sizes based on equipment power requirements, acceptable voltage drops, and assumptions about the facility source impedance. The minimum conductor size is based on the total line impedance and NEC requirements. Unless impedance calculations are performed by an electrical engineer, the recommended values must be used.



Detail for Connection of X-Ray On Light and Door Switch
(Optimus Rad/RF Generator Only)

WL DS

(99.1)



Wall Box Mounting Detail (01.0)

ME

- Standard Reference Drawing -
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Digital Diagnost VM

Date
O.A. Number
Drawn By
Quote Number
Project Number
N-SRD040005

ED1
Sheet 15 of 17

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Philips Medical Systems Remote Services Network (RSN)

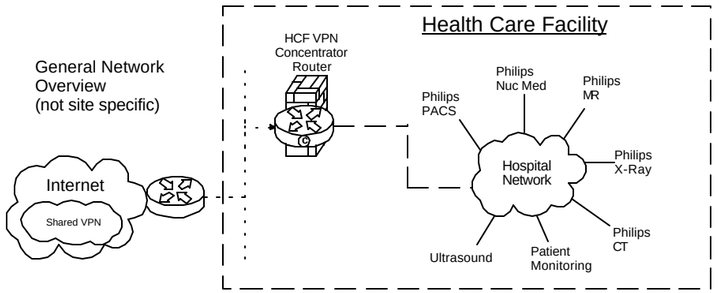
Secure broadband connection required for Philips remote technical support, diagnostics, and applications assistance

Broadband Site-to-Site Connectivity (Preferred)

This connectivity method is designed for customers who prefer a connection from the RSN Data Center to the Health Care Facility (HCF) utilizing their existing VPN equipment.

Connectivity Details:

- A Site-to-Site connection from the RSN data center's Cisco router will be established to the HCF's VPN concentrator
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE as standard, but alternative standards are also available, such as AES, MD5, SHA, Security Association lifetime and Encryption Mode
- Every system that we will be servicing remotely will have a static NAT IP that we configure on the RSN Data center side.



Action Required by Hospital:

- Review and approve connection details
- Complete appropriate Site Checklist
- Configure and allow Site-to-Site access prior to setting up connectivity depending on the access criteria that the HCF decides to implement (ex: Source IP filtering, destination IP filtering, NAT assignment, etc.)
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to the designed IP provided by Philips

Broadband Router Installed at Health Care Facility

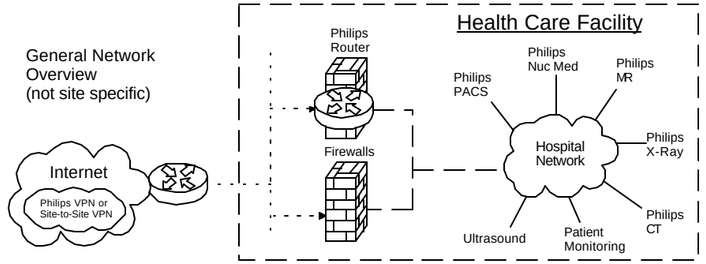
This connectivity method is designed for customers who have a dedicated high speed connection for Philips equipment.

Connectivity Details:

- An RSN Cisco 1711 or 1712 router will be preconfigured and installed at the HCF by Philips in conjunction with the HCF IT representative.
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE and will be established from the RSN-DC and terminated at the RSN Router on-site
- One to One NAT is used to limit access to Philips eqiupment only
- Router Config and IP auditing is enabled for Customer IT to view via website 24/7
- Dedicated DSL connections are also supported

Option 1: Parallel to HCF Firewall Connectivity Method

This connectivity method is designed for customers who prefer a Philips RSN Router installed on site utilizing all the security features provided and managed by Philips.

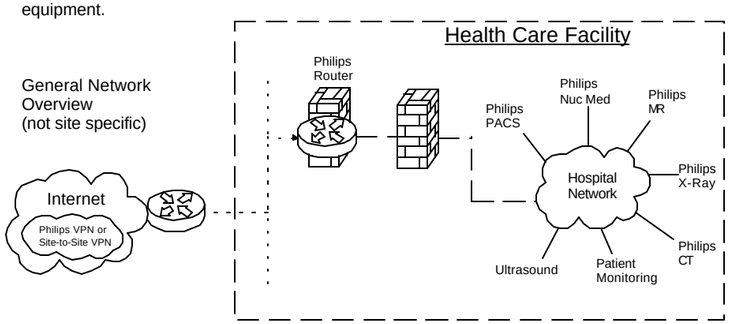


Action Required by Hospital:

- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network
- Complete appropriate Site Checklist
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.

Option 2: Back End Connected to the HCF Firewall Connectivity Method

This connectivity method is designed for customers who prefer a Philips RSN Router installed on site by setting up an IP-Based policy allowing access thru existing HCF Firewall to Philips equipment.

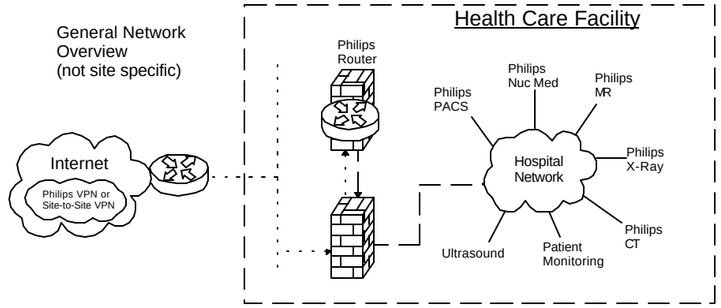


Action Required by Hospital:

- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network
- Complete appropriate Site Checklist
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.
- Configure and allow on the firewall on the DASHED line interface access between the IP address allocated by the hospital to the Philips internal Ethernet router interface and the target modality IP address.

Option 3: Router Installed Inside the HCF's DZM

This connectivity method is designed for customers who prefer the RSN Router installed inside and existing, or new DMZ, allowing access to Philips equipment.



Action Required by Hospital:

- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network
- Complete appropriate Site Checklist
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.
- Configure and allow on the firewall on the DASHED line interface IPSec protocol communication by opening protocol 500, 50, 51, 47 and port 23 + TACACS. Traffic should be between external IP Address located on the Philips router and the RSN Data center IP address 192.68.48/24 and IP address AOSN TACAS
- Configure and allow on the firewall on the DASHED line interface access between the IP address allocated by the hospital to the Philips internal Ethernet router interface and the target modality IP address

- Standard Reference Drawing -
Not Site Specific
Digital Diagnost VM

Date | O.A. Number
Drawn By | Quote Number
Project Number N-SRD040005

N1
Sheet 16 of 17

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Instructions

This form is to be used by Project Manager, Contractor and Service Engineer.

Information is used to develop and determine site ready date.

Items listed are go/no go items for delivery unless noted as delay only items.

Items identified with *** as delayed items must be completed after hours or on weekend. These itmes cannot be accomplished while installation is in progress. Also, these items must be completed within two days of installation start or they may stop installation.

Site Readiness Checklist

- ☐ Customer site preparation verified in general against the Philips final planning drawings.
- ☐ Walls finished including painting.
- ☐ Doors installed.
- ☐ Floor leveled according to Philips drawings and specifications.
- ☐ Floors are tiled/covered finished. Flooring is covered with protective covering (scratch protection).
- ☐ Ceiling lights installed.
- ☐ Cable conduit and ductwork installed and clean. Position checked. Duct covers in place but not finally closed. Cable opening are clear, without sharp edges. Pull strings in conduit. Installation per Philips specifications.
- ☐ HVAC environmental equipment installed and working according to Philips specifications.
- ☐ Ceiling installation completed.
- ☐ Electrical preparation according to Philips specifications.
- ☐ All network cabling, drops installed according to Philips specifications (including hardcopy cameras).
- ☐ All pre-cabling identified on Philips drawings has been installed.
- ☐ Pre-move survey completed - Delivery route identified.
- ☐ Lead glass installed ***.
- ☐ X-ray warning lights installed ***.
- ☐ Dedicated phone line for modem use***.
- ☐ Room has been cleaned ***.
- ☐ Cabinets and casework installed***.

Modality Checklist

- ☐ Unistrut installed and level according to Philips specifications
- ☐ Blocking support for wall stand
- ☐ Conduit lenghts measured according to Philips specifications. NOTE: Specifications are from source box to destination box (not just conduit run length)
- ☐ Wall support for wall stand

Approved for Delivery

Project Manager **Date**

Service Engineer **Date**

Questionnaire for DigitalDiagnost VM
Cataloque section 712-55 Direct Radiography)

This questionnaire must be used with your order.
Mark all items with a cross.
Fill in your special requests with help of the drawing Z-5.1 and forward it to your SSD order desk.
Bold * marked items = default.

Order No. :	Country :
Customer :	
Project leader :	
Phone No. :	
e-mail :	
Signature :	Date :

Siebel catalogue	PMS catalogue	Cable lengths (m) from outlet to outlet		
FRQ 3101	704-Q01	Generator → Generator control desk	20*	
		Generator control desk → Generator	20	
		Generator control desk → SCU2	20	
		Generator control desk → Workstation	24	
		Generator → Segment control unit 2 (SCU2)	6	
FRQ 3123	704-Q23	Generator → Workstation	20*	
FDQ 5505	712-Q05	SCU2 → Workstation	20*	
FRQ 3121	704-Q21	Generator → BuckyDiagnost CS	10*	
		SCU2 → BuckyDiagnost CS	16	
		Single Sided Table TH-S CAN → SCU2/Generator (PE)	10/16	
		General		
FMS 0001	704-Q99	Country of delivery	USA*	
FMS 0002	712 Q98	Operator Manual Language	ENG*	
		Additional remarks:		
		Generator		
FMS 0003		Mains voltage (50/60Hz)	415-480V NMSA 604 / MRD 5781	
		Control desk version	Desk version*	
		BuckyDiagnost CS		
FRQ 3110	704-Q10	Ceiling height	< 3.0 m* ☐ Tube support upper pos.	>3.0 m ☐ Tube support lower pos.
		Length of ceiling rails	Standard	Reduction
NRDN 223	MRD 1821	A → For longitudinal carriage rear side CS2	☐ 2356 mm	☐ mm max. 100 mm
NRDN 223	MRD 1821	B → For longitudinal carriage front side CS2		☐ mm max. 500 mm
NRDN 223	MRD 1821	A → For longitudinal carriage rear side CS4	☐ 4076 mm	☐ mm max. 500 mm
NRDN 223	MRD 1821	B → For longitudinal carriage front side CS4		☐ mm max. 900 mm
NRDN 229	MDD 1521	C → Option: Rail extension (CS2/4 + VM)	☐ 2700 mm	☐ mm
NRDN 222	MRD 5581	D → Rail separation (rail connection parts incl.)	☐ 0 mm	☐ mm
NRDN 223	MRD 1821	E → Rail length (total)	☐ 4300 mm	☐ mm
		DigitalDiagnost VM		
FDQ 5523	712-Q23	Operation side DigitalDiagnost VM	userside right*	
FDQ 5038	704-Q38	Wall holder for min. room height 2650mm	no	
		Ceiling holder for guide rail	room height 2680-2894 (middle version)*	

PHILIPS

- Standard Reference Drawing -
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Project Number N-SRD040005

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